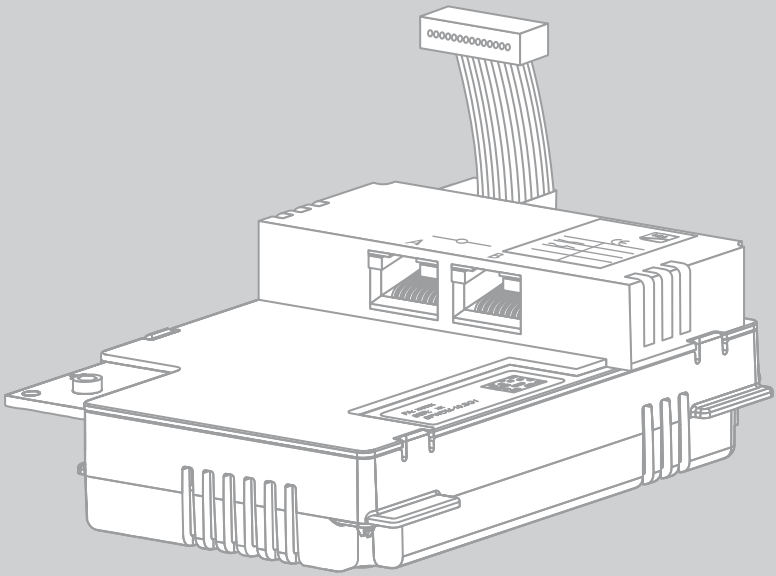
Installation Manual

SMA SPEEDWIRE/WEBCONNECT DATA MODULE



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1 Information on this Document

Validity

This document is valid for device type "SWDM-10.GR1" (Speedwire/Webconnect data module) from hardware version A and firmware version 1.00.11.R.

Target Group

This document is for skilled persons. Only persons with the appropriate skills are allowed to perform the tasks described in this manual (see Section 2.2, page 8).

Additional Information

Links to additional information can be found at www.SMA-Solar.com:

Document title	Document type
Firmware Update with SD Card	Technical description

Symbols

Symbol	Explanation
⚠ DANGER	Indicates a hazardous situation which, if not avoided, will result in death or serious injury
⚠ WARNING	Indicates a hazardous situation which, if not avoided, could result in death or serious injury
⚠ CAUTION	Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury
NOTICE	Indicates a situation which, if not avoided, could result in property damage
i	Information that is important for a specific topic or goal, but is not safety-relevant
☐	Indicates an essential requirement for achieving a specific goal
☑	Desired result
✖	A problem that might occur

Typography

Typography	Explanation	Example
bold	• Display texts • Elements of a user interface • Terminals • Elements to be selected • Elements to be entered	• The value can be read from the **Energy** field. • Select **Settings**. • Enter the value **10** in the **Minutes** field.
>	• Connects several elements to be selected	• Select **Settings > Date**.
[**Button/Key**]	• Button or key to be selected or pressed	• Select [**Next**].

Nomenclature

Full designation	Designation in this document
PV plant	Plant
Small-scale PV plant	Small-scale plant
Large-scale PV plant	Large-scale plant
SMA Cluster Controller	Cluster Controller
SMA Speedwire	Speedwire
SMA Speedwire/Webconnect data module	Speedwire/Webconnect data module
SMA Webconnect function	Webconnect function
SMA inverter	Inverter

Abbreviations

Abbreviation	Designation	Explanation
AC	Alternating Current	–
DC	Direct Current	–
DHCP	Dynamic Host Configuration Protocol	Protocol for the dynamic assignment of IP configurations
ESD	Electrostatic Discharge	–
ESS	Electronic Solar Switch	The Electronic Solar Switch and the DC connectors form a DC load disconnect unit
IP	Internet Protocol	–
PIC	Product Identification Code	Identification key for registration in Sunny Portal
RID	Registration Identifier	Registration key for registration in Sunny Portal
AF	Width Across Flats	The distance between two parallel flat surfaces ("flats") of a screw head.
UMTS	Universal Mobile Telecommunications System	System succeeding GSM

Figures

The figures in this document have been created for inverters of type Sunny Boy and may deviate slightly in some cases for inverters of type Sunny Tripower.

2 Safety

2.1 Appropriate Usage

The Speedwire/Webconnect data module is a Speedwire communication interface with Webconnect function for inverters. Speedwire is a cable-based type of communication based on the Ethernet standard and the communication protocol SMA Data2+. This enables inverter-optimised 10/100 Mbit data transmission between Speedwire devices in PV plants. The Webconnect function enables direct data transmission between the inverters of a small-scale plant and the Internet portal Sunny Portal without any additional communication device and for a maximum of four inverters per Sunny Portal plant. For this, a Speedwire/Webconnect data module must be installed in each of the inverters. You can access your Sunny Portal plant from any computer with an Internet connection. The Speedwire/Webconnect data module performs the following tasks:

- Set-up of a Speedwire network in small-scale and large-scale plants
- Data exchange with Sunny Portal:
  - In small-scale plants via a router with Internet connection
  - In large-scale plants via the Cluster Controller
- Data exchange with Sunny Explorer from version 1.06
- For PV plants in Italy: Connection to or isolation from the electricity grid and definition of the frequency limits to be used with IEC61850-GOOSE messages

The Speedwire/Webconnect data module is available as a retrofit kit or is pre-installed in the inverter. For safety reasons, it is not permitted to modify the product or install components that are not explicitly recommended or distributed by SMA Solar Technology AG for this product.

Only use the Speedwire/Webconnect data module in accordance with the specifications provided in the enclosed documentation. Any other use may result in personal injury or property damage.

The enclosed documentation is an integral part of this product.

- Read and observe the documentation.
- Keep the documentation in a convenient place for future reference.

2.2 Qualifications of Skilled Persons

The work described in this document must be performed by skilled persons only. Skilled persons must have the following qualifications:

- Training in the installation and commissioning of electrical devices and plants
- Knowledge of how to deal with the dangers and risks associated with installing and using electrical devices and plants
- Knowledge of all applicable standards and directives
- Knowledge of how an inverter works and is operated
- Knowledge of and adherence to this document and all safety precautions

2.3 Safety Precautions

This section contains safety precautions that must be observed at all times when working on or with the product. To prevent personal injury or property damage and to ensure long-term operation of the product, read this section carefully and comply with the safety precautions at all times.

⚠ DANGER

Danger to life due to electric shock when the inverter is opened

High voltages are present in the conductive components of the inverter. Touching live components results in death or serious injury.

- Prior to performing any work on the inverter, always disconnect the inverter from all voltage sources on the AC and DC sides (see inverter installation manual). Observe the waiting time to allow the capacitors to discharge.

⚠ CAUTION

Risk of burns due to hot enclosure parts

Some parts of the inverter enclosure can get hot during operation. Touching these enclosure parts can result in burn injuries.

- Do not touch any parts other than the lower enclosure lid of the inverter during operation.

NOTICE

Risk of damage to the inverter through dust intrusion or moisture penetration if the ESS is not plugged in

When closed and with the ESS plugged in, the inverter has the degree of protection IP65.
The inverter is thus protected against dust intrusion and water penetration. Dust intrusion and water penetration can damage the inverter.

- When the ESS is not plugged in, measures must be taken to protect the inverter against dust and water.
- Firmly plug in the ESS again after performing any work on the inverter.

Damage to the inverter due to electrostatic discharge

The internal components of the inverter can be irreparably damaged by electrostatic discharge.

- Earth yourself before touching any inverter components.

2.4 Operating Instructions

NOTICE

High costs possible due to inappropriate Internet rates

When using the Webconnect function, a constant Internet connection is required.

Depending on the quality of the Internet connection, the data transfer volume for an inverter is between 150 MB and 550 MB per month. When using the plant overview in Sunny Portal with live data display, there is an additional data volume of 600 kB per hour.

- Since there is a constant Internet connection to Sunny Portal, time-based billing systems should be avoided. High costs could be incurred. SMA Solar Technology AG recommends using an Internet flat rate.

If UMTS is used, VoIP is required

If UMTS is used, VoIP (Voice over IP) is required to use the Webconnect function.

- Ensure that the UMTS provider also provides the "VoIP" service".

2.5 Supported Products

SMA Inverters

The Speedwire/Webconnect data module may only be installed in the following inverters with at least firmware version 2.53:

Sunny Boy

- SB 2500TLST-21
- SB 3000TLST-21
- SB 3000TL-21
- SB 3600TL-21
- SB 4000TL-21
- SB 5000TL-21

Sunny Tripower

- STP 8000TL-10
- STP 10000TL-10
- STP 12000TL-10
- STP 15000TL-10
- STP 15000TLEE-10
- STP 15000TLHE-10
- STP 17000TL-10
- STP 20000TLEE-10
- STP 20000TLHE-10

If the firmware version of the inverter is lower than 2.53, you must perform a firmware update to version 2.53 or higher for this inverter. For information on performing the firmware update, refer to the Technical Description "Firmware Update with SD Card" at www.SMA-Solar.com.

Additional SMA products

- SMA Cluster Controller from firmware version 1.0
- Sunny Explorer from software version 1.06
- SMA Connection Assist from software version 1.00.8.R

Sunny Explorer and SMA Connection Assist are available free of charge at www.SMA-Solar.com

3 Scope of Delivery

Check the scope of delivery for completeness and any visible external damage.
Contact your specialist dealer if the delivery is incomplete or damaged.

Order Option: Speedwire/Webconnect Data Module Pre-Installed in the Inverter

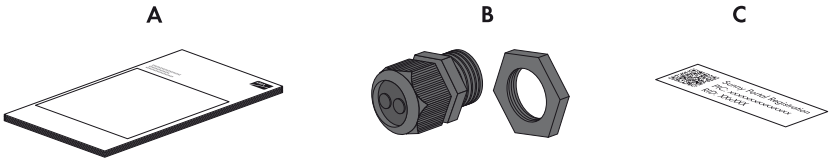


Figure 1: Components of the order option "Speedwire/Webconnect data module pre-installed in the inverter"

Item	Number	Designation
A	1	Installation manual
B	1	Cable gland
C	1	Label with PIC and RID for registration of a small-scale plant in Sunny Portal

Order Option: Speedwire/Webconnect Data Module as Retrofit Kit

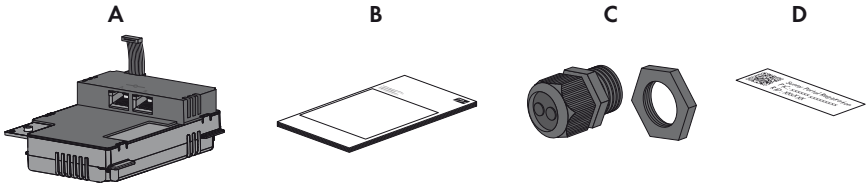


Figure 2: Components of the order option "Speedwire/Webconnect data module as retrofit kit"

Item	Number	Designation
A	1	Speedwire/Webconnect data module (SWDM-10)
B	1	Installation manual
C	1	Cable gland
D	2	Label with PIC and RID for registration of a small-scale plant in Sunny Portal

4 Product Description

4.1 Speedwire/Webconnect Data Module

The Speedwire/Webconnect data module is a Speedwire communication interface with Webconnect function for inverters. Speedwire is a cable-based type of communication based on the Ethernet standard and the communication protocol SMA Data2+. This enables inverter-optimised 10/100 Mbit data transmission between Speedwire devices in PV plants. The Webconnect function enables direct data transmission between the inverters of a small-scale plant and the Internet portal Sunny Portal without any additional communication device and for a maximum of four inverters per Sunny Portal plant. For this, a Speedwire/Webconnect data module must be installed in each of the inverters. You can access your Sunny Portal plant from any computer with an Internet connection.

The Speedwire/Webconnect data module performs the following tasks:

- Set-up of a Speedwire network in small and large-scale plants
- Data exchange with Sunny Portal:
  - In small-scale plants via a router with Internet connection
  - In large-scale plants via the Cluster Controller
- Data exchange with Sunny Explorer from software version 1.06

The Speedwire/Webconnect data module is available as a retrofit kit or is pre-installed in the inverter.

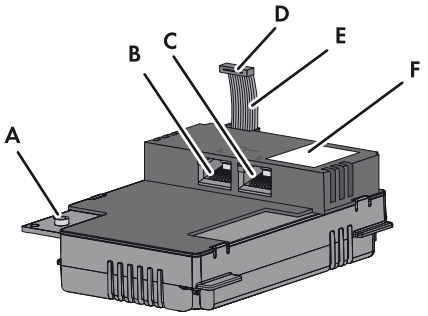


Figure 3: Components of the Speedwire/Webconnect data module

Item	Designation
A	Hexagon socket screw (AF 3)
B	Network socket A
C	Network socket B
D	Ribbon cable plug
E	Ribbon cable
F	Type label

Label with PIC and RID for Registration of a Small-Scale Plant in Sunny Portal

To activate the Speedwire/Webconnect data module of a small-scale plant in Sunny Portal, you will need the PIC and RID numbers printed on the label included in the delivery. After installation of the Speedwire/Webconnect data module, attach the label on the exterior of the inverter in the vicinity of the type label. Keep the other label in a safe place for future reference.

Use in Small-Scale Plants with a Maximum of Four Inverters

A small-scale plant in Sunny Portal can consist of a maximum of four inverters with installed Speedwire/Webconnect data module.

In small-scale plants, the Speedwire network can be set up optionally with linear, star or tree topology. Depending on the plant, the computer with the Sunny Explorer software will be connected to the router or the network switch.

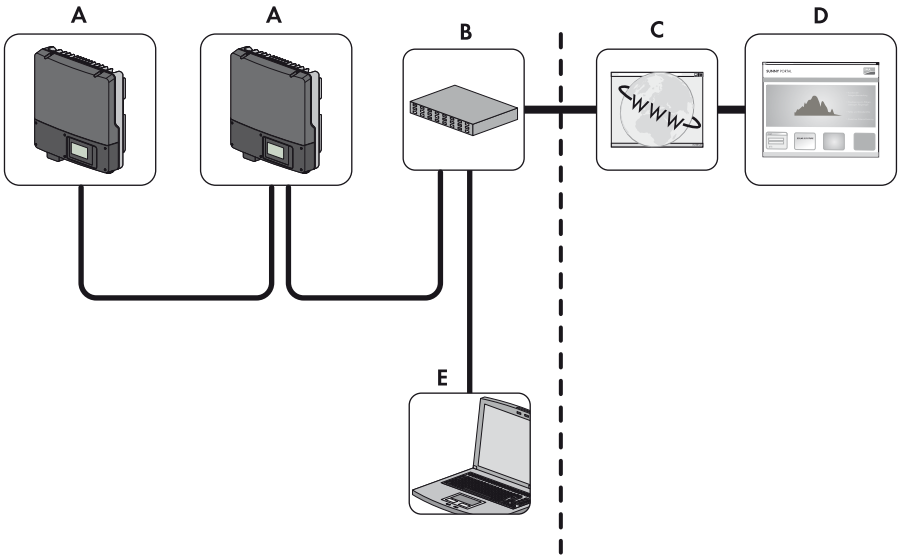


Figure 4: Small-scale plant with two inverters in linear topology (example)

Item	Designation
A	Inverter with Speedwire/Webconnect data module
B	Router
C	Internet
D	Sunny Portal
E	Computer with Sunny Explorer

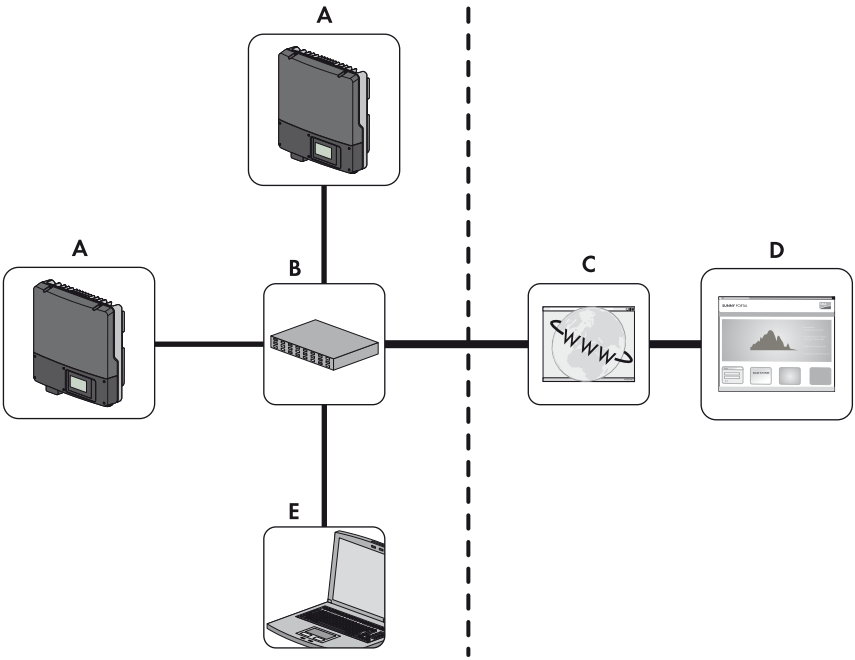


Figure 5: Small-scale plant with two inverters in star topology (example)

Item	Designation
A	Inverter with Speedwire/Webconnect data module
B	Router
C	Internet
D	Sunny Portal
E	Computer with Sunny Explorer

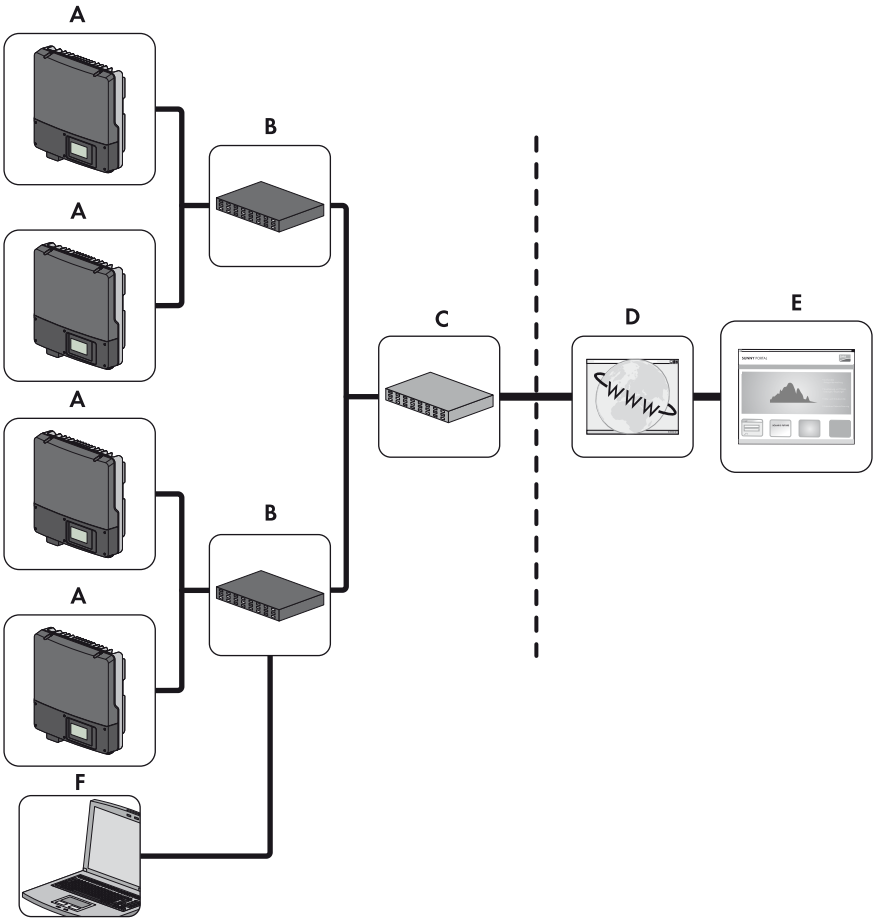


Figure 6: Small-scale plant with four inverters in tree topology (example)

Item	Designation
A	Inverter
B	Network switch
C	Router
D	Internet
E	Sunny Portal
F	Computer with Sunny Explorer

Use in Large-Scale Plants with Cluster Controller

The Speedwire network can be set up optionally with linear or tree topology. In large-scale plants with Cluster Controller, the data exchange with Sunny Portal does not take place via the individual inverters, but centrally via the Cluster Controller (see user manual of the Cluster Controller and user manual of the Cluster Controller in Sunny Portal).

Deactivation of the Webconnect function of inverters in large-scale plants with Cluster Controller

In large-scale plants with Cluster Controller, communication with Sunny Portal takes place via the Cluster Controller itself.

- For optimum operation of large-scale plants with Cluster Controller, deactivate the Webconnect function of the inverters with installed Speedwire/Webconnect data module (see user manual of the Cluster Controller).

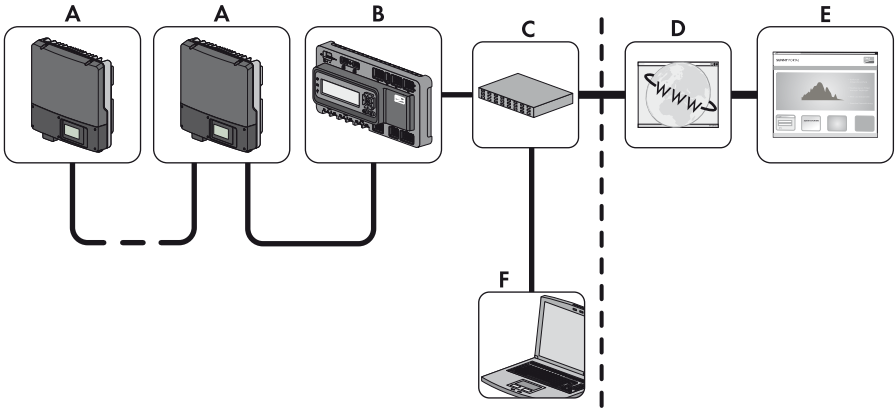


Figure 7: Large-scale plant with Cluster Controller and inverters in linear topology (example)

Item	Designation
A	Inverter with Speedwire/Webconnect data module
B	Cluster Controller
C	Router
D	Internet
E	Sunny Portal
F	Computer with access to the user interface of the Cluster Controller

4.2 Type Label

The type label clearly identifies the product. The type label is located in the right-hand top corner on the front of the product. You will find the following information on the type label:

- Device type (Type)
- Serial number (Serial No.)
- Hardware version (Version)
- PIC
- RID
- MAC address

You will require the information on the type label to use the product safely and for customer support from the SMA Service Line. The type label must be permanently attached to the product.

Symbols on the Type Label

Symbol	Designation	Explanation
CE	CE marking	The product complies with the requirements of the applicable EU directives.
N23114	C-Tick	The product complies with the requirements of the applicable Australian EMC standards.
	Data matrix code	2D code for device-specific characteristics

4.3 Cable Gland

The cable gland fixes the network cables to the inverter enclosure. The cable gland also protects the interior of the inverter from dust intrusion and moisture penetration.

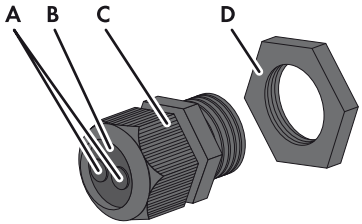


Figure 8: Structure of cable gland

Item	Designation
A	Filler plug
B	Seal
C	Swivel nut
D	Counter nut

5 Connection

5.1 Mounting Position and Cable Route

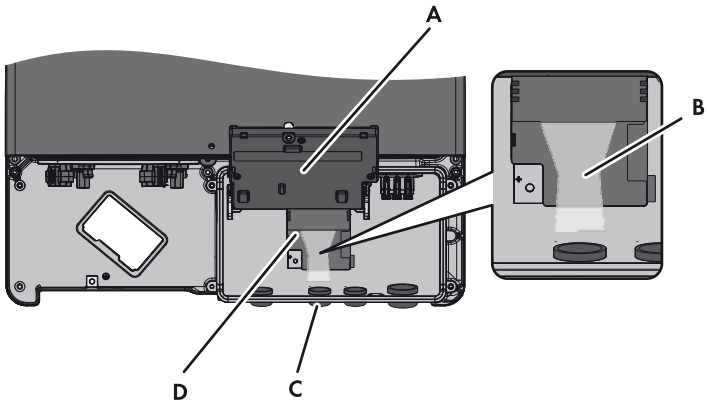


Figure 9: Mounting position and cable route in the inverter with the lower enclosure lid open and the display flipped up

Item	Designation
A	Flipped up display
B	Cable route to network sockets
C	Opening in the inverter enclosure with filler plug
D	Mounting position of the Speedwire/Webconnect data module in the inverter

5.2 Cable Requirements and Information on Cable Routing

With Speedwire, the cable length and quality have an effect on the signal quality. Observe the following cable requirements and the note on laying them.

Disturbance of data transmission due to unshielded power cables

If unshielded power cables are used, they generate an electromagnetic field which may induce interference in network cables during data transmission.

- When laying network cables, observe the following minimum clearances to unshielded power cables:
  - For installation without separating strip: at least 200 mm
  - For installation with aluminium separating strip: at least 100 mm
  - For installation with steel separating strip: at least 50 mm

Cable requirements:

- ☐ UV-resistant for outdoor use
- ☐ Number of insulated wire pairs and insulated wire cross-section: at least 2 x 2 x 0.22 mm^2 or at least 2 x 2 AWG 24
- ☐ External diameter of the cable: the maximum external diameter of the cable depends on the size of the cable gland included in the delivery.
- ☐ Cable category: Cat5, Cat5e, Cat6, Cat6a, Cat7
- ☐ Cable shield: SF/UTP, S/UTP, SF/FTP, S/FTP
- ☐ Plug type: RJ45 for Cat5, Cat5e, Cat6, Cat6a
- ☐ Cable length between two nodes: max. 50 m with patch cable, max. 100 m with installation cable

SMA Solar Technology AG recommends the following cable types:

- For outdoor use: SMA COMCAB-OUTxxx
- For indoor use: SMA COMCAB-INxxx

The cables are available in the lengths xxx = 100 m, 200 m, 500 m and 1,000 m.

5.3 Installing the Speedwire/Webconnect Data Module

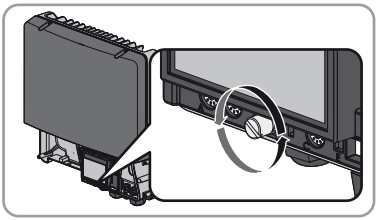
1. **⚠ DANGER**

   Danger to life due to electric shock when the inverter is opened

   High voltages are present in the conductive components of the inverter. Touching live components results in death or serious injury.

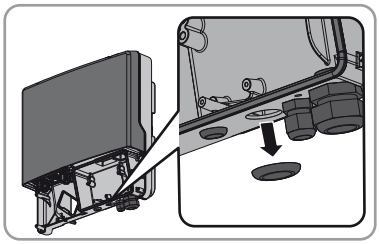
   - Disconnect the inverter from voltage sources on the AC and DC sides and open it (see the inverter installation manual). Observe the waiting time to allow the capacitors to discharge.

2. Loosen the screw of the display until the display can be flipped up.

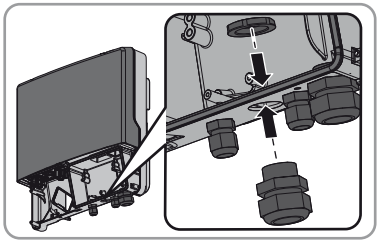


3. Flip the display up until it clicks into place.

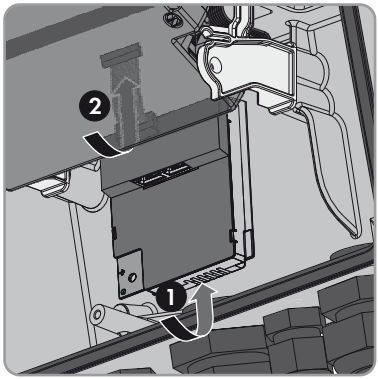
4. Push the pre-mounted filler plug out of the second hole from the left in the inverter enclosure and retain it for future decommissioning.



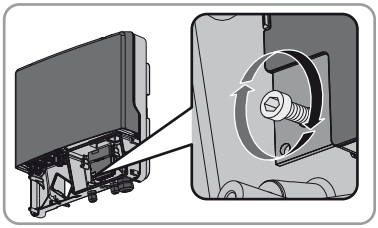
5. Attach the cable gland to the enclosure opening using the counter nut.



6. Insert the Speedwire/Webconnect data module and slide the ribbon cable upwards behind the display. The key on the top edge of the Speedwire/Webconnect data module must fit into the hole in the plastic retainer in the inverter.

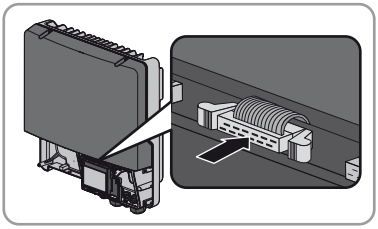


7. Fasten the Speedwire/Webconnect data module hand-tight with the hexagon socket screw (AF 3).



8. Flip the display down.

9. Plug the ribbon cable plug onto the centre connector strip.



10. Stick one of the labels with the data for registration in Sunny Portal (PIC and RID) on the outside of the inverter in the vicinity of the type label.
11. If you do not wish to proceed immediately with the connection of the Speedwire/Webconnect data module, close the inverter (see inverter installation manual).

5.4 Connecting the Speedwire/Webconnect Data Module

Depending on the plant topology you require, you must connect either one or two cables to the Speedwire/Webconnect data module.

Requirement:

☐ The network cables must be pre-assembled according to the plant topology and the cable requirements (see Section 5.2, page 20).

Additionally required material (not included in scope of delivery):

☐ Network cable (see Section 5.2 "Cable Requirements and Information on Cable Routing", page 20)

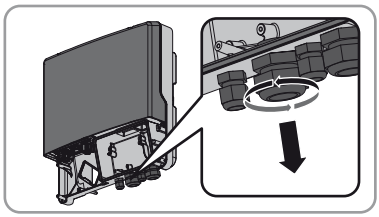
Procedure:

1. **⚠ DANGER**

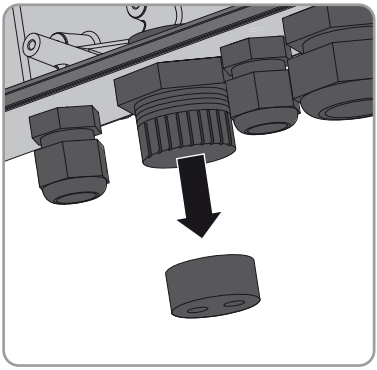
   Danger to life due to electric shock when the inverter is opened

   High voltages are present in the conductive components of the inverter. Touching live components results in death or serious injury.

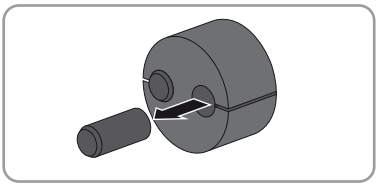
   - If the inverter has not yet been opened, disconnect the inverter from voltage sources on the AC and DC sides and open it (see the inverter installation manual). Observe the waiting time to allow the capacitors to discharge.
2. Flip the display up until it clicks into place.
3. Unscrew the swivel nut of the cable gland on the inverter.



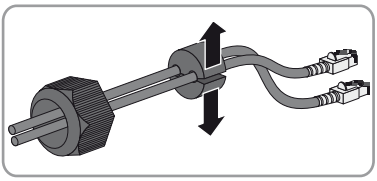
4. Press the seal out of the cable gland from the inside.



5. Lead the network cables from the outside into the inverter through the loose swivel nut and the cable gland.
6. For each network cable, remove one of the filler plugs from the seal and retain for later decommissioning.



7. Lead the network cables through the swivel nut and into the seal. Route the network cable plugs into the inverter to the network sockets.



8. Push the seal into the cable gland. Make sure that any unused cable openings are sealed with filler plugs.
9. Screw the swivel nut of the cable gland on lightly.
10. Insert the network cables into the network sockets. This can be done in any order.
11. Fasten the swivel nut on the cable gland hand-tight. This will secure the network cables in place.
12. Flip the display down and fasten it hand-tight with the display screw.
13. Close the inverter (see inverter installation manual).
14. In a small-scale plant, connect at least one inverter directly to the router using a network cable depending on the plant topology.
15. In a large-scale plant with Cluster Controller, connect the Cluster Controller to the Speedwire network in accordance with the required network topology (see the Cluster Controller installation manual).

6 Commissioning

6.1 Commissioning a Large-Scale Plant with Cluster Controller

Requirements:

- ☐ Speedwire/Webconnect data modules must be installed in the inverters (see Section 5.3, page 21).
- ☐ Speedwire/Webconnect data modules must be connected (see Section 5.4, page 23).
- ☐ The Cluster Controller must be connected to the Speedwire network in accordance with the desired network topology (see installation manual of the Cluster Controller).

Procedure:

1. Commission all inverters (see inverter installation manual).
2. For optimum operation of large-scale plants with Cluster Controller, deactivate the Webconnect function of the inverters with installed Speedwire/Webconnect data module (see user manual of the Cluster Controller). In large-scale plants with Cluster Controller, communication with Sunny Portal takes place via the Cluster Controller itself.

6.2 Commissioning a Small-Scale Plant

Requirements:

- ☐ Speedwire/Webconnect data modules must be installed in the inverters (see Section 5.3, page 21).
- ☐ Speedwire/Webconnect data module must be connected (see Section 5.4, page 23).
- ☐ There must be a router with Internet connection in the local network of the plant.
- ☐ At least one inverter must be connected to the router.
- ☐ If the IP addresses in the local network are to be assigned dynamically, DHCP must be activated in the router (see the router manual). If you do not want to use DHCP or your router does not support DHCP, use either the SMA Connection Assist or Sunny Explorer to integrate the inverters with the Speedwire/Webconnect data module into your network (see Section 2.5 "Supported Products", page 11).

Procedure:

1. Commission all inverters (see inverter installation manual).
2. For plants in Italy, in order to adjust the settings to receive control signals from the network operator in the Speedwire/Webconnect data module, follow the steps below:
   - Connect with Sunny Explorer (see Section 6.3.2, page 27).
   - Enter your personal SMA Grid Guard code in Sunny Explorer (see Sunny Explorer help).
   - Set the following parameters in Sunny Explorer (for setting parameters in a device, see Sunny Explorer help):

External Communication > IEC 61850 configuration			
Parameter	**Value/Range**	**Resolution**	**Default**
Application-ID	0 to 16384	1	16384
Goose-Mac address	01:0C:CD:01:00:00 to 01:0C:CD:01:02:00	1	01:0C:CD:01:00:00

- In the field **Application-ID**, set the Application ID of the network operator gateway. You will receive this value from your network operator. You can enter a value between **0** and **16384.** The value **16384** indicates "deactivated".
- In the field **Goose-Mac address**, enter the MAC address of the network operator gateway from which the Speedwire/Webconnect data module is to receive the control commands. You will receive this value from your network operator.

☑ The receipt of network operator control signals has been set.

6.3 Managing a Small-Scale Plant with Sunny Explorer

6.3.1 Functions and Parameter Settings in Sunny Explorer

The following functions for plant management in Sunny Explorer are available:

- Overview of the plant status
- Graphic display of key plant data, device data and energy values
- Parameterisation of individual devices or an entire device class
- Simple diagnostics through display of faults and events
- Data export of inverter energy values and events in CSV format
- Device updates

You can change the following parameters in Sunny Explorer:

- Device name of the inverter
- Automatic IP configuration On/Off
- DNS-IP, gateway IP, IP address, subnet mask
- Webconnect function On/Off

6.3.2 Creating a Small-Scale Plant in Sunny Explorer

Requirements:

☐ The plant must be commissioned (see Section 6.2, page 25).

☐ Sunny Explorer must be installed on the computer (see Section 2.5 "Supported Products", page 11).

Procedure:

1. Connect the computer to the plant router using a network cable.
2. If you have used the SMA Connection Assist for the static network configuration, ensure that the SMA Connection Assist has ended.
3. Start Sunny Explorer and create a Speedwire plant for the small-scale plant in Sunny Explorer (see Sunny Explorer help).

6.4 Plant Registration in Sunny Portal

6.4.1 Registering a Large-Scale Plant with Cluster Controller in Sunny Portal

Requirements:

☐ The large-scale plant with Cluster Controller must be commissioned (see Section 6.1, page 25).

☐ Your computer must have an Internet connection.

☐ The Cluster Controller must be connected to a router with Internet connection (see installation manual of the Cluster Controller).

☐ JavaScript must be activated in the Internet browser.

Procedure:

- In large-scale plants with Cluster Controller, register in Sunny Portal using the user interface of the Cluster Controller (see user manual of the Cluster Controller).

6.4.2 Registering a Small-Scale Plant in Sunny Portal

Requirements:

- ☐ The small-scale plant must be commissioned (see Section 6.2, page 25).
- ☐ PIC and RID must be available for the Speedwire/Webconnect data module.
- ☐ Your computer must have an Internet connection.
- ☐ JavaScript must be activated in the Internet browser.

Maximum permissible number of devices for a small-scale plant in Sunny Portal

In Sunny Portal, a maximum of four inverters with installed Speedwire/Webconnect data module is permitted per small-scale plant.

Small-scale plant with Speedwire/Webconnect data module cannot be combined with other plants

If you already have a plant with a different communication device, e.g. Sunny WebBox, in Sunny Portal, you will still need to create a separate small-scale plant with Speedwire/Webconnect data module. It is not possible to combine the Speedwire/Webconnect data module and other communication devices within one plant in Sunny Portal. Sunny Portal treats the existing plant and the new small-scale plant with Speedwire/Webconnect data module as independent plants.

- Create a new small-scale plant with Speedwire/Webconnect data module.

Exchange of the Speedwire/Webconnect data module in the inverter

If you have exchanged the Speedwire/Webconnect data module in the inverter for a new Speedwire/Webconnect data module, the PIC and the RID of the inverter change. Therefore, you must also exchange the inverter using the Plant Setup Assistant in Sunny Portal (see the Sunny Portal user manual). In the Plant Setup Assistant, you must enter the PIC and the RID of the new Speedwire/Webconnect data module.

Starting the Plant Setup Assistant in Sunny Portal

The Plant Setup Assistant is a step-by-step guide to the processes required for user registration and the registration of your plant in Sunny Portal

Procedure:

1. Open **www.SunnyPortal.com**.
2. Select [**Plant Setup Assistant**].
   ☑ The Plant Setup Assistant opens.
3. Follow the instructions of the Plant Setup Assistant.

7 Decommissioning

7.1 Removing the Speedwire/Webconnect Data Module

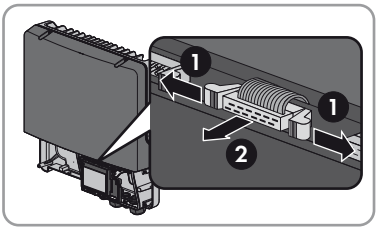
1. **⚠ DANGER**

   Danger to life due to electric shock when the inverter is opened

   High voltages are present in the conductive components of the inverter. Touching live components results in death or serious injury.

   - Disconnect the inverter from voltage sources on the AC and DC sides and open it (see the inverter installation manual). Observe the waiting time to allow the capacitors to discharge.

2. Press the left-hand and right-hand lock hooks outwards and remove the ribbon cable plug from the centre connector strip of the inverter.



3. Loosen the screw of the display until the display can be flipped up.
4. Flip the display up until it clicks into place.
5. Unscrew the swivel nut of the cable gland.
6. Remove the network cables from the Speedwire/Webconnect data module.
7. Unscrew the counter nut of the cable gland.
8. Remove the cable gland and network cables from the inverter.
9. Release the hexagon socket screw of the Speedwire/Webconnect data module (AF 3) and remove the module.
10. Flip the display down and fasten the display screw hand-tight.
11. Seal the enclosure opening of the inverter with the corresponding filler plug.
12. Close the inverter (see inverter installation manual).

7.2 Packaging the Speedwire/Webconnect Data Module for Shipping

- Package the Speedwire/Webconnect data module for shipping. Use the original packaging or packaging that is suitable for the weight and size of the Speedwire/Webconnect module (see Section 9 "Technical Data", page 31).

7.3 Disposing of the Speedwire/Webconnect Data Module

- Dispose of the Speedwire/Webconnect data module in accordance with the regulations for the disposal of electronic waste applicable at the site of installation.

8 Troubleshooting

Problem	Cause and corrective measures
The Speedwire/Webconnect data module cannot be accessed.	There is no Speedwire connection. **Corrective measures:** • Ensure that all network cable plugs are inserted and locked. • Ensure that all inverters in the plant are in operation. • Make sure that the plant router is switched on. • Make sure that the ribbon cable plug of the Speedwire/ Webconnect data module is correctly plugged into the centre connector strip in the inverter.
	The inverter does not recognise the Speedwire/Webconnect data module. **Corrective measures:** • Perform a firmware update on the inverter (see Technical Description "Firmware Update with SD Card" at www.SMA-Solar.com).
	Firewall or IP filter settings are not correct. **Corrective measures:** • Adjust firewall or IP filter settings (see firewall or router manual).
	The Speedwire/Webconnect data module does not have a valid IP address. **Corrective measures:** • Ensure that DHCP is activated in the router or assign a manual IP address to the Speedwire/Webconnect data module.

9 Technical Data

General Data	
Mounting location	in the inverter
Voltage supply	via inverter

Mechanical Data	
Width x height x depth	73 mm x 88 mm x 34 mm

Communication	
Communication Interface	Speedwire/Webconnect
Maximum cable length	100 m

Connections	
Type of plug	RJ45
Number of RJ45 terminals	2

Ambient Conditions for Storage/Transport	
Ambient temperature	− 40°C to +85°C
Relative humidity, non-condensing	10% to 100%

10 Contact

If you have technical problems concerning our products, please contact the SMA Service Line. We require the following information in order to provide you with the necessary assistance:

- Inverters:
  - Type
  - Serial number
  - Firmware version
- Speedwire/Webconnect data module
  - Type
  - Serial number
  - Firmware version
  - Number of Speedwire/Webconnect data modules connected
- Large-scale PV plants:
  - Serial number and firmware version of the Cluster Controller
- Small-scale PV plants:
  - Name of your Sunny Portal plant
  - PIC and RID of the Speedwire/Webconnect data module

Australia	SMA Australia Pty Ltd. Sydney	Toll free for Australia: International:	1800 SMA AUS (1800 762 287) +61 2 9491 4200
Belgien/ Belgique/ België	SMA Benelux bvba/sprl Mechelen	+32 15 28 67 30	
Brasil	Vide España (Espanha)		
Česko	SMA Central & Eastern Europe s.r.o. Praha	+420 235 010 417	
Chile	Ver España		
Danmark	Se Deutschland (Tyskland)		

Deutschland	SMA Solar Technology AG Niestetal	Medium Power Solutions	
		Wechselrichter: Kommunikation: SMS mit „Rückruf“:	+49 561 9522-1499 +49 561 9522-2499 +49 176 888 222 44
		Hybrid Energy Solutions	
		Sunny Island:	+49 561 9522-399
		Power Plant Solutions	
		Sunny Central:	+49 561 9522-299
España	SMA Ibérica Tecnología Solar, S.L.U. Barcelona	Exento de tasas en España:	900 14 22 22
		Internacional:	+34 900 14 22 22
France	SMA France S.A.S. Lyon	Medium Power Solutions	
		Onduleurs : Communication :	+33 (0)4 72 09 04 40 +33 (0)4 72 09 04 41
		Hybrid Energy Solutions	
		Sunny Island :	+33 (0)4 72 09 04 42
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		Sunny Central :	+33 (0)4 72 09 04 43
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Italia	SMA Italia S.r.l. Milano	+39 02 8934-7299	
Κύπρος/ Kıbrıs	Βλέπε Ελλάδα/ Bkz. Ελλάδα (Yunanistan)		
Luxemburg/ Luxembourg	Siehe Belgien Voir Belgien (Belgique)		
Magyarország	lásd Česko (Csehország)		
Nederland	zie Belgien (België)		
Österreich	Siehe Deutschland		
Perú	Ver España		
Polska	Patrz Česko (Czechy)		
Portugal	SMA Solar Technology Portugal, Unipessoal Lda Lisboa	Isento de taxas em Portugal:	800 20 89 87
		Internacional:	+351 2 12 37 78 60
România	Vezi Česko (Cehia)		

Schweiz	Siehe Deutschland		
Slovensko	pozri Česko (Česká republika)		
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United Kingdom	SMA Solar UK Ltd. Milton Keynes	+44 1908 304899	
Ελλάδα	SMA Hellas AE Αθήνα	801 222 9 222 International:	 +30 212 222 9 222
България	Вижте Ελλάδα (Гърция)		
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대한민국	SMA Technology Korea Co., Ltd. 서울	+82 2 508-8599	
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Other countries	International SMA Service Line Niestetal	Toll free worldwide: 00800 SMA SERVICE (+800 762 7378423)

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